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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/578,046	05/01/2006	Alex Wegmann	BS122970APCT	5322

324 7590 10/24/2008

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EXAMINER
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SANDERS, KRIELLION ANTONETTE

ART UNIT	PAPER NUMBER
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1796

MAIL DATE	DELIVERY MODE
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10/24/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/578,046	<b>Applicant(s)</b> WEGMANN ET AL.	
	<b>Examiner</b> Kriellion A. Sanders	<b>Art Unit</b> 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 7/25/08.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 12-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/17/06</u> .   | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election of Group I, claims 1-11 and the species encompassing the hindered phenolic antioxidant, depicted as compound 1 of page 36 of the disclosure, and as a thioether or thioester, DLTDP, di-lauryl-thio-di-propionate, in the reply filed on 7/25/2008 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

2. Claims 12-14 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 7/25/2008.

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1- 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0849314 in view of GB1001344 and British patent No. 1,001,344 and Uhrhan et al, US Patent No. 4,088,629

The EP 0849314 reference discloses a stabilizer composition for PVC comprising a zinc carboxylate; an alkyl ester of thiodipropionic acid; and a phenolic antioxidant.

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The preferred alkyl esters of thiodipropionic acids are of the type such as dilauryl 3, 3'-thiodipropionate (DLTDP) which is highly preferred in the invention. The second component of the stabilizer composition of the invention, i.e. the alkyl ester of thiodipropionic acid, is generally present in the final composition in an amount of from about 40 to about 80 parts by weight. Any grade of this second component of the stabilizer composition of the present application satisfactory for food contact applications may be employed in the invention.

The third component of the stabilizer composition of the present invention is a phenolic antioxidant. Any of the phenolic antioxidants which are low in toxicity and known to those skilled in the art can be employed in the present invention. The phenolic antioxidants typically contain one or more phenolic hydroxyl groups and one or more phenolic nuclei and contain from about 8 to about 75 carbon atoms. Thus, monocyclic as well as polycyclic phenols are contemplated in the invention. Suitable phenolic antioxidants that may be employed in the present invention include, but are not limited to, 4, 4'-isopropylidenediphenol, 1,1,3-tris(2'-methyl-4'-hydroxy-5'-t-butylphenyl)butane, 2,2'-ethylidene (bis(4,6-di-t-butyl)phenol, 2,6-di-t-butyl-4-methylphenol(BHT), and 1,1,3-tris-(1-methyl-3-hydroxy-4-t-butylphenyl)butane, 2,2'-methylenebis-4(octylphenol), 2-ethylbutylene-4,4'-bisphenol, octadecyl 3,5-di-t-butyl-4-hydroxyphenyl- propionate, 1,3,5-tris(3,5-di-t-butyl-4-hydroxybenzyl) isocyanurate and pentaerythritol tetrakis (3,5-di-t-butyl-4- ( hydroxyphenyl)propionate). Of the phenolic antioxidants listed hereinabove, BHT is highly preferred in the present invention. The preferred phenolic antioxidants employed in the present invention are FDA regulated phenolic compounds which are selected from the group consisting of 4,4'-isopropylidenediphenol, 1,1,3-tris(2'-methyl-4'-hydroxy-5'-t-butylphenyl)butane, 2,2'-ethylidene bis(4,6-di-t-butyl)phenol and 2,6-di-t-butyl-4-

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methylphenol(BHT). A highly preferred FDA regulated phenolic antioxidant employed in the present invention is BHT. The third component of the stabilizer composition of the present invention, i.e. the phenolic antioxidant, is generally present in the final composition in an amount of from about 5 to about 20 parts by weight.

The patented invention differs from applicants in that it does not name applicant's specifically elected phenolic antioxidant compound. However, the patented invention does encompass the phenolic antioxidants of applicant's claims in that patentee indicates that any of the phenolic antioxidants which are low in toxicity and known to those skilled in the art can be employed in the present invention. Therefore, no patentable difference may readily be ascertained between the present and patented inventions. See pages three and four.

British patent No. 1,001,344 discloses a combination of (B) sulphur-containing compound and (C) organic antioxidant for improving the heat stability of chlorine containing polymers (See col.3, lines 96-98; claims 1, 4, 18, 20) Example 2 describes a composition comprising (A) a copolymer of vinyl chloride with (B') a 2,6-ditertiary-butyl-4-methyl-phenol and (C1)dilaurylthiodipropionate as heat stabilizers. According to claim 18, compound (B) can also be (B1)2, 4-dimethyl-6-tertiary-butyl- phenol (i.e. 2-tert-butyl-4, 6-dimethylphenol).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to utilize the 2, 4-dimethyl-6-tertiary-butyl- phenol (i.e. 2-tert-butyl-4, 6-dimethylphenol) of the British patent as a phenolic antioxidant generically discloses in the EP patent.

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British patent No. 1,001,344 further discloses light stabilizer compositions for chlorine containing polymers including a sulphur-containing compound and a phenolic antioxidant. Examples of the classes of sulphur-containing compounds that may be used include the dilauryl thiodipropionates.

The organic antioxidants used may be of the type including 2, 6 di-tertiary butyl 4-methyl phenol, 2:4 di- methyl 6-tertiary butyl phenol, 2, 2' methylene bis [4-methyl (or 4-ethyl) 6-tertiary butyl phenol]. See the abstract of the document.

Therefore, it is obvious to combine both sulphur containing compounds and phenolic antioxidants in PVC and other halogen-containing polymeric compositions to derive light stability.

Uhrhan et al further documents that hindered amines and phosphorus stabilizers are conventionally combined with hindered phenols and sulphur containing stabilizers to provide enhanced stability to P VC resins. Therefore, it would have been obvious to one of ordinary skill in the art to include the hindered amines and phosphorus stabilizers of Uhrhan et al in the PVC compositions of EP 0849314 to achieve their usual stabilizing properties. See cols. 1-3.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kriellion A. Sanders whose telephone number is 571-272-1122. The examiner can normally be reached on Monday through Thursday 8:30am-7:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kriellion A. Sanders/

Primary Examiner, Art Unit 1796

Kriellion A. Sanders  
Primary Examiner  
Art Unit 1796

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